WHAT IS CLAIMED IS:

1. A TEM sample cut from a solid state material with length (l) and width (b) and with a front-side sample surface (7), comprising a curable adhesive (3) of the flowable type and fixing a fiber (2) with diameter (d) on the sample surface (7) aligned in the longitudinal direction of the sample (1) substantially on-center with respect to the width (b), **characterized in that** the adhesive (3) is substantially applied over the entire area on the sample surface (7) and the fiber (2) is substantially fixed adhesively along its entire length.

2. A sample as claimed in claim 1, **characterized in that** the sample width (b) is maximally 20 μm.

3. A sample as claimed in claim 2, **characterized in that** the sample width (b) is in the range of 10 to 20 μm and the diameter (d) of the fiber (2) is not greater than the sample width (b).

4. A sample as claimed in claim 3, **characterized in that** the diameter (d) of the fiber (2) is in the range of 5 to 20 μm.

5. A sample as claimed in claim 4, **characterized in that** the wire fiber (2) covers at least one half of the adhesive (3).

6. A sample as claimed in claim 5, **characterized in that** the adhesive (3) is an epoxy adhesive.

7. A sample as claimed in claim 6, **characterized in that** the wire fiber (2) is comprised of carbon or silicon carbide.

8. A method for the preparation of a TEM sample cut from a solid state material with length (l) and width (b) and with a front-side sample surface (7) onto which a curable adhesive (3) of the flowable type is applied for fixing a fiber (2) with diameter (d) on the sample surface (7), aligned in the longitudinal direction of the sample (l) substantially centrally with respect to width (b), **characterized in that** the adhesive (3) is applied substantially over the entire area of the sample surface (7) and the fiber (2) with the adhesive (3) applied on it becomes self-aligned and is substantially over its entire length wetted with the adhesive (3), and that it is subsequently cured.

9. A method as claimed in claim 8, **characterized in that** the sample is cut to a width (b) of maximally 20 μm.

10. A method as claimed in claim 9, **characterized in that** the sample is cut to a width (b) in the range of 10 to 20 μm and the diameter (d) of the fiber (2) is not greater than the sample width (b).

11. A method as claimed in claim 10, **characterized in that** the diameter (d) of the fiber (2) is in the range of 5 to 20 μm.

12. A method as claimed in claim 11, **characterized in that** the fiber (2) covers at least half of the adhesive (3).

13. A method as claimed in claim 12, **characterized in that** as the adhesive (3) an epoxy adhesive is utilized.

14. A method as claimed in claim 13, **characterized in that** as the fiber material (2) carbon or silicon carbide is utilized.